

LISTING OF THE CLAIMS

1. (Currently Amended) A system comprising:
 - a database;
 - a message server having no persistent state such that the message server can be restarted after a failure without performing state recovery operations; and
 - a plurality of instances of an application server implementing a Java application model coupled in a star topology with the message server at a center of the star topology, the plurality of instances sharing the database.
2. (Original) The system of Claim 1 wherein each instance comprises:
 - a dispatcher node; and
 - a plurality of server nodes.
3. (Original) The system of Claim 2 wherein each server node comprises:
 - a java 2 enterprise edition (J2EE) engine.
4. (Original) The system of Claim 1 further comprising:
 - a central lock server to provide cluster wide locks to the plurality of instances.
5. (Original) The system of Claim 1 wherein the message server comprises:
 - a first data structure to store a list of connected clients; and
 - a second data structure and a list of services provided in the system.
6. (Previously Presented) A computer readable storage media containing executable computer program instructions which when executed cause a digital processing system to perform a method comprising:
 - starting a central services node to provide at least one of a locking service and a messaging service, the messaging service having no persistent state;
 - starting a plurality of application server instances; and
 - organizing the application server instances into a cluster having star topology with the central services node at a center of the star topology.

7. (Original) The computer readable storage media of Claim 6 containing executable computer program instructions which when executed cause a digital processing system to perform the method further comprising:

sharing a database among the plurality of application server instances.

8. (Original) The computer readable storage media of 6 containing executable computer program instructions which when executed cause a digital processing system to perform the method wherein starting a plurality of application server instances comprises:

starting, for each application server instance of the plurality, a dispatcher node and a plurality of server nodes.

9. (Original) The computer readable storage media of Claim 6 containing executable computer program instructions which when executed cause a digital processing system to perform the method further comprising:

starting a message server having no persistent state.

10. (Original) The computer readable storage media of Claim 6 containing executable computer program instructions which when executed cause a digital processing system to perform the method further comprising:

registering each application server with the messaging server.

11. (Currently Amended) The computer readable storage media of Claim 6 containing executable computer program instructions which when executed cause a digital processing system to perform the method further comprising:

conducting inter instance communication through the messaging ~~services~~server.

12. (Original) The computer readable storage media of Claim 9 containing executable computer program instructions which when executed cause a digital processing system to perform the method further comprising:

restarting the message server without state recovery responsive to a system failure.

13. (Original) The computer readable storage media of Claim 10 containing executable computer program instructions which when executed cause a digital processing system to perform the method further comprising:

notifying all registered instances from the message server when an additional instance joins the cluster.

14. (Previously Presented) A system comprising:
 - means for organizing a plurality of application servers instances into a cluster having a star topology with a central services node at a center of the star topology;
 - means for sharing a storage resource across the cluster; and
 - means for performing centralized inter instances communication without maintenance of persistent state information.
15. (Original) The system of Claim 14 further comprising:
 - means for centralized locking of a resource within the cluster.
16. (Original) The system of Claim 14 wherein the means for performing comprises:
 - a message server having no persistent state.
17. (Original) The system of Claim 14 wherein the means for performing comprises:
 - means for registering instances; and
 - means for recording services provided in the cluster.
18. (Previously Presented) A method comprising:
 - starting a central services node to provide at least one of a locking service and a messaging service, the messaging service not maintaining a persistent state;
 - starting a plurality of application server instances; and
 - organizing the application server instances into a cluster having star topology with the central services node at a center of the star topology.
19. (Original) The method of Claim 18 further comprising:
 - sharing a database among the plurality of application server instances.
20. (Original) The method of Claim 18 wherein starting a plurality of application server instances comprises:
 - starting, for each instance of the plurality, a dispatcher node and a plurality of server nodes.

21. (Original) The method of Claim 18 wherein starting a central service node comprises:
starting a message server having no persistent state.
22. (Original) The method of Claim 18 wherein organizing comprises:
registering each application server with the messaging server.
23. (Original) The method of Claim 18 further comprising:
conducting inter instance communication through the messaging service.
24. (Original) The method of Claim 21 further comprising:
restarting the message server without state recovery responsive to a system failure.
25. (Original) The method of Claim 22 wherein organizing further comprises:
notifying all registered instances from the message server when an additional instance
joins the cluster.
26. (New) The system of Claim 1, wherein each application server instance registers with the
messaging server.
27. (New) The system of Claim 1, wherein inter-instance communications are conducted
through the messaging server.
28. (New) The system of Claim 26, wherein each registered application server instance is
notified by the message server when an additional instance registers with the messaging server.